

CLAIMS

1. A body weight gain inhibitor, which comprises a polypeptide containing the same or substantially the same amino acid sequence as that represented by SEQ ID NO: 16, or its amide or ester, or salts thereof.

2. A body weight loss agent, which comprises a polypeptide containing the same or substantially the same amino acid sequence as that represented by SEQ ID NO: 16, or its amide or ester, or salts thereof.

3. An adipose gain inhibitor, which comprises a polypeptide containing the same or substantially the same amino acid sequence as that represented by SEQ ID NO: 16, or its amide or ester, or salts thereof.

4. A feeding inhibitor, which comprises a polypeptide containing the same or substantially the same amino acid sequence as that represented by SEQ ID NO: 16, or its amide or ester, or salts thereof.

5. A screening method of weight gain inhibitor, agent for weight loss, adipose gain inhibitor or feeding inhibitor, which is characterized by using a polypeptide containing the same or substantially the same amino acid sequence as that represented by SEQ ID NO: 16, or its amide or ester, or salts thereof.

6. Further, the screening method according to claim 5, which uses a protein containing the same or substantially the same amino acid sequence as that represented by SEQ ID NO: 4, SEQ ID NO: 126, SEQ ID NO: 138 or SEQ ID NO: 144, its partial peptide, or salts thereof.

7. A screening kit for body weight gain inhibitor, body weight loss agent, adipose gain inhibitor or feeding inhibitor, which is characterized by using a polypeptide containing the same or substantially the same amino acid sequence as that represented by SEQ ID NO: 16, or its amide or ester, or salts thereof.

8. Further, the screening kit according to claim 7, which contains a protein containing the same or substantially the same amino acid sequence as that represented by SEQ ID NO: 4, SEQ ID NO: 126, SEQ ID NO: 138 or SEQ ID NO: 144, its partial peptide, or salts thereof.

9. A body weight gain inhibitor, a body weight loss agent, an adipose gain inhibitor or a feeding inhibitor, which is obtained using the screening method according to claim 5 or the screening kit according to claim 7.

10. A body weight gain inhibitor, a body weight loss agent, an adipose gain inhibitor or a feeding inhibitor, which comprises a compound or a salt thereof having an activity of a polypeptide containing the same or substantially the same amino acid ssequence as that represented by SEQ ID NO: 16, its amide or ester, or salts thereof.

11. A body weight gain inhibitor, a body weight loss agent, an adipose gain inhibitor or a feeding inhibitor, which comprises an agonist to a protein containing the same or substantially the same amino acid sequence as that represented by SEQ ID NO: 4, SEQ ID NO: 126, SEQ ID NO: 138 or SEQ ID NO: 144, its partial peptide or salts thereof.

12. A body weight gain inhibitor, a body weight loss agent, an adipose gain inhibitor or a feeding inhibitor, which comprises a polynucleotide containing the base sequence encoding a polypeptide containing the same or substantially the same amino acid ssequence as that represented by SEQ ID NO: 16, its amide or ester, or salts thereof.

13. A screening method of body weight gain inhibitor, body weight loss agent, adipose gain inhibitor or feeding inhibitor, which is characterized by using a polynucleotide containing the base sequence encoding a polypeptide containing the same or substantially the same amino acid ssequence as that represented by SEQ ID NO: 16, its amide or ester, or salts thereof.

14. A screening kit for body weight gain inhibitor, body weight loss agent, adipose gain inhibitor or feeding inhibitor, which is characterized by comprising a polynucleotide containing the base sequence encoding a polypeptide containing the same or substantially the same amino acid ssequence as that represented by SEQ ID NO: 16, its amide or ester, or salts thereof.

15. A body weight gain inhibitor, a body weight loss agent, an adipose gain inhibitor or a feeding inhibitor, which is obtained using the screening method according to claim 13 or the screening kit according to claim 14.

16. A polypeptide, which is characterized by comprising the amino acid sequence represented by SEQ ID NO: 149.

17. The polypeptide according to claim 16, which is labeled.

18. The screening method according to claim 5, in which the polypeptide according to claim 16 is used.

19. The screening method according to claim 6, in which (i) the polypeptide according to claim 17 and (ii) a protein containing the same or substantially the same amino acid sequence as that represented by SEQ ID NO: 4, SEQ ID NO: 126, SEQ ID NO: 138 or SEQ ID NO: 144, its partial peptide or salts thereof, are used.

20. The screening method according to claim 19, in which (i) the polypeptide according to claim 17 and (ii) a protein containing the same or substantially the same amino acid sequence as that represented by SEQ ID NO: 4 or SEQ ID NO: 144, its partial peptide or salts thereof, are used.

21. The screening method according to claim 19, in which the polypeptide according to claim 17 and a protein containing the amino acid sequence represented by SEQ ID NO: 144, its partial peptide or salts thereof, are used.

22. A method for body weight gain inhibition, body weight loss agent, adipose gain inhibition or feeding inhibition, which is characterized by administering to mammals an effective amount of (i) a polypeptide containing the same or substantially the same as that represented by SEQ ID NO: 16, its amide or ester, or salts thereof, (ii) a compound or a salt thereof having an activity of the polypeptide, the amide or ester, or salts thereof, or (iii) an agonist to a protein containing the same or substantially the same amino acid sequence as that represented by SEQ ID NO: 4, SEQ ID NO: 126, SEQ ID NO: 138 or SEQ ID NO: 144, its partial peptide or salts thereof.

23. Use of (i) a polypeptide containing the same or substantially the same as that represented by SEQ ID NO: 16, its amide or ester, or salts thereof, (ii) a compound or a salt thereof having an activity of the polypeptide, the amide or ester, or salts thereof, or (iii) an agonist to a protein containing the same or substantially the same amino acid sequence as that represented by SEQ ID NO: 4, SEQ ID NO: 126, SEQ ID NO: 138 or SEQ ID NO: 144, its partial peptide or salts thereof for manufacturing a body weight gain inhibitor, a body weight loss agent, an adipose gain inhibitor or a feeding inhibitor.